

REMARKS/ARGUMENTS

Claims 1–7 and 9–11 are pending in the captioned application; claim 9 has been withdrawn from consideration.

The Examiner has rejected claim 10 under 35 U.S.C. § 112, second paragraph, as “being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. ‘(P)ackaging’ is considered to render the claim indefinite.”

In response, Applicants respectfully direct the Examiner’s attention to page 14, line 23 of the captioned application which describes chromatographic packaging for which claim materials can be used. Applicants respectfully assert that one skilled in the art would understand what is meant by the term “chromatographic packaging” and respectfully submit that such does not render the claim indefinite.

In view of the foregoing, Applicants respectfully assert the Examiner’s rejections cannot be sustained and should be withdrawn.

The Examiner has rejected claims 1–7 and 10–11 under the “judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application No. 09/532,285.”

The Examiner continues, “although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in an obvious difference in scope.

While Applicants do not agree with the Examiner’s rejection, for administrative convenience only and not in any way recognizing the validity of such rejection, Applicants submit, concurrently herewith, a Terminal Disclaimer, which terminally disclaims any portion of term of this patent that may exceed the term of US Patent No. 6,641,735, which issued on November 4, 2003, from the cited application.

In view of the foregoing, Applicants respectfully assert the Examiner’s rejections cannot be sustained and should be withdrawn.

The Examiner has rejected Claims 1–7 and 10–11 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as “obvious over each of JP 09-049830 including the MAT translation..., JP 08-103653 including the PTO translation..., JP 07-136505 including the PTO translation..., and JP 07-135957 including the PTO translation...”

Specifically, the Examiner states, “the claims are considered to read on each of,” the cited references, continuing, “if a difference exists between the claims and each of” the cited references “in optimizing the elements of each of” the cited references “to enhance separation”.

In response, Applicants respectfully disagree and respectfully assert the Examiner is misapplying the teachings of the cited applications, as presented in the translations the Examiner has provided, as applied to the instant invention.

Specifically, Applicants respectfully assert that the Makoto reference (JP 07-136505) discloses a composite material made from a responsive polymer mixed with a second polymer, and having coupled affinity groups attached by a spacer. It appears that the spacer is conventional in that it separates the affinity group from the surface and does not participate in adsorption or desorption. While length of the spacer is not specified, such spacers are also much shorter generally than polymers.

In the instant invention, the responsive polymer itself is used as the tracer. As such, the responsiveness in the polymer is used to aid the desorption of the target molecule by application of the appropriate stimulus. This is quite different and unlike the system disclosed in the reference 07-136505. Further, this reference applies the idea to the attachment of cells, so it is sensible that the affinity groups are closer to the supports

due to the size of the cells that are attached. Such is not required with the instant invention. Further, the other references cited by the Examiner from Makoto (namely JP 08-103653 and JP 07-135957) also contain this same system.

With regard to JP 09-0498301, it is seen that the separation takes place at the surface, as disclosed on e.g., page 9. Further, as stated in the last section of page 13, it is apparent that stimulus responsive polymers are not attached to the ligands. Indeed, it appears to be the opposite of the invention in that they fold polymers to let them participate in the adsorption (see e.g., page 3, which states that the polymer has affinity for the target) and then unfold the polymers (let them extend from the surface) to provide an attraction too weak to allow desorption of the target. As seen, this is quite different from the instant invention, which used a stimulus responsive polymer as a spacer providing a desorption that is not possible with the cited art. Indeed, there is no disclosure nor even any suggestion of this.

In view of the foregoing, Applicants respectfully assert the Examiner's rejections cannot be sustained and should be withdrawn.

The Examiner has rejected claim 6 under 35 U.S.C. § 103(a) as being "unpatentable over each of JP 09-049830 including the MAT translation of JP 09-049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505

including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 in view of Mikes' Laboratory Handbook of Chromatographic and Allied Methods 1979, pages 388-390."

Specifically, the Examiner states, "at best, the claim differs from each of" the cited Japanese "in reciting use a spacer". The Examiner continues, "Mikes' Laboratory Handbook of Chromatographic and Allied Methods 1979, pages 388-390 discloses that a spacer makes a ligand more accessible to its target substance. It would have been obvious to use a spacer in each of" the Japanese cited references "because Mikes' Laboratory Handbook of Chromatographic and Allied Methods...discloses that a spacer makes a ligand more accessible to its target substance".

In response, Applicants reiterates the arguments as to the inapplicability of the Japanese references presented above and respectfully assert that the addition of the Mikes' Laboratory Handbook does nothing to remedy these deficiencies.

In view of the foregoing, Applicants respectfully assert the Examiner's rejections cannot be sustained and should be withdrawn.

The Examiner has rejected Claim 7 under 35 U.S.C. § 103(a) as being "unpatentable over each of JP 09-049830 including the MAT translation of JP 09-

049830, JP 08-103653 including the PTO translation of JP 08-103653, JP 07-136505 including the PTO translation of JP 07-136505, and JP 07-135957 including the PTO translation of JP 07-135957 in view of each of JP 08-103653 including the PTO translation of JP 08-103653 and JP 09-049830 including the MAT translation of JP 09-049830 and Hosoya (Anal. Chem. 1995,67, 1907-1922)".

Specifically, the Examiner states, "at best, the claim differs from each of" the cited Japanese references "in reciting use of epoxy and use of uniformly sized particles". The Examiner continues, "each of JP 08-103653...and JP 09-049830...discloses epoxy allows connection of the ligand. Hosoya...discloses that uniformly sized polymer based packing materials separate faster with better resolution. It would have been obvious to use epoxy and uniformly size particles in each of JP 09-049830..., JP 08-103653..., JP 07-136505..., and JP 07-135957...because each of JP 08-103653...and JP 09-049830...discloses epoxy allows connection of the ligand and Hosoya...discloses that uniformly sized polymer based packing materials separate faster with better resolution".

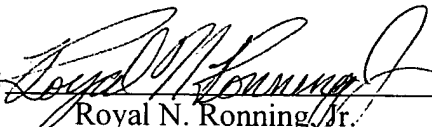
In response, Applicants reiterates the arguments as to the inapplicability of the cited Japanese patent references presented above, and further respectfully assert that the addition of the Hosoya reference does nothing to remedy these deficiencies.

In view of the foregoing, Applicants respectfully assert the Examiner's rejections cannot be sustained and should be withdrawn.

In view of the foregoing, Applicant respectfully asserts the Examiner's rejections cannot be sustained and should be withdrawn. Applicants believe that claims 1-7 and 10-11 are in allowable form and earnestly solicit their allowance.

Respectfully submitted,

AMERSHAM BIOSCIENCES CORP

By: 
Royal N. Ronning, Jr.
Reg. No.: 32,529

Amersham Biosciences Corp
800 Centennial Avenue
P. O. Box 1327
Piscataway, New Jersey 08855-1327

Tel: (732) 457-8423
Fax: (732) 457-8463

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on November 14, 2003.

Signature: 

Name: Melissa Leck